Goodman
Air Conditioning & Heating

GMVC8

80% AFUE

Heating Input: 70,000–115,000 BTU/h

ComfortNet™-Compatible Two-Stage, Variable-Speed Gas Furnace

ComfortNet™ CONTROL SYSTEM

Standard Features

- Aluminized steel, dual-diameter tubular heat exchanger
- Two-stage gas valve operates on two-stage or single-stage thermostats
- ComfortNet™ Communications System compatible
- Efficient and quiet, variable-speed ECM circulator motor gently ramps up or down according to heating or cooling demand
- Silicon Nitride igniter
- Furnace control board with self-diagnostics, color-coded low-voltage terminals, and provisions for electronic air cleaner and 120-volt or 24-volt humidifiers
- Low constant fan speed allows homeowner to activate a very low speed, efficiently circulating air throughout the home. This setting costs as little as a 100-watt light bulb to operate.
- Quiet, two-speed induced draft blower
- All models comply with California NOx emissions standards

Cabinet Features

- Fully insulated, heavy-gauge steel cabinet with durable baked-enamel finish
- Designed for multi-position installation: upflow, horizontal left or right
- Removable bottom for side- or bottom-return applications
- Coil and furnace fit flush for most installations

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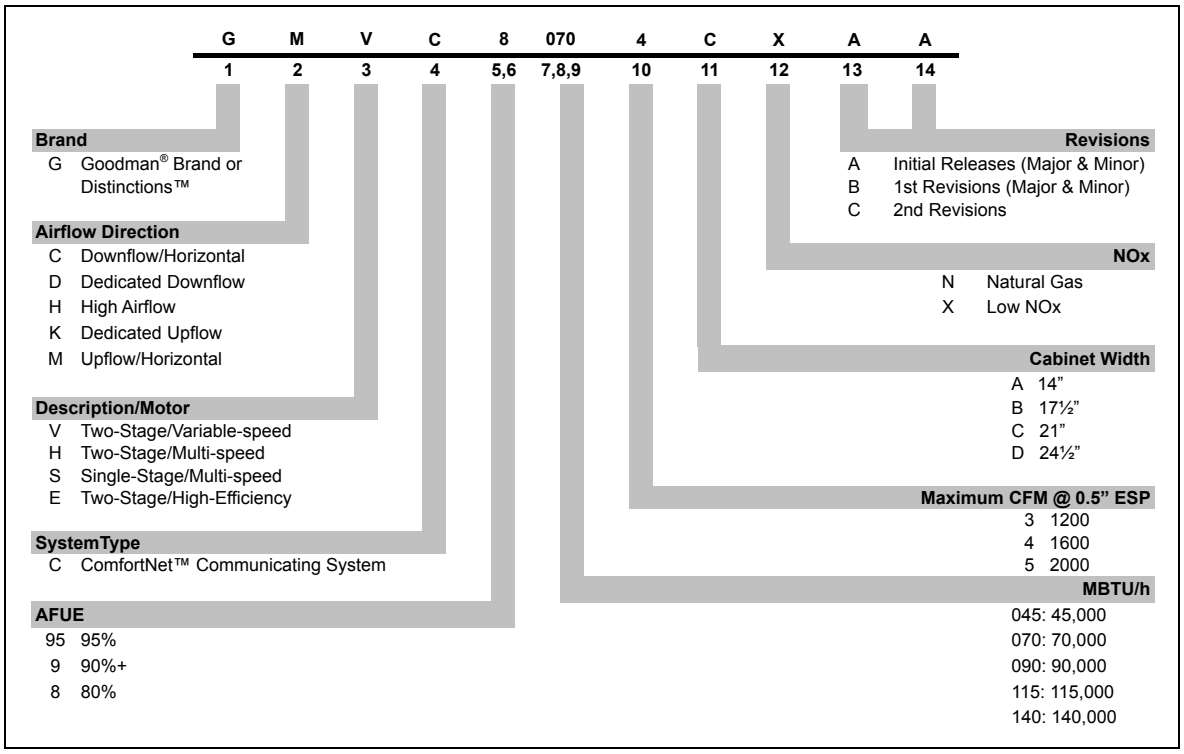
LIFETIME HEAT EXCHANGER LIMITED WARRANTY* | 10 YEAR UNIT REPLACEMENT LIMITED WARRANTY* | 10 YEAR PARTS LIMITED WARRANTY* | GoodCare | ama | ETL

* Complete warranty details available from your local dealer or at www.goodmanmfg.com. To receive the Lifetime Heat Exchanger Limited Warranty (good for as long as you own your home), 10-Year Unit Replacement Limited Warranty and 10-Year Parts Limited Warranty, online registration must be completed within 60 days of installation. Online registration is not required in California or Québec.

DARE TO COMPARE

Nomenclature



Accessories

Model	Description	GMVC8 0704BX*	GMVC8 0905CX*	GMVC8 1155CX*
LPM-05	LP Conversion Kit (Springs & Orifice) [1]	√	√	√
LPM-06	LP Conversion Kit (Springs & Orifice) [2]	√	√	√
AFE18-60A	Fossil Fuel Kit (must be used in a dual-fuel application with a compatible thermostat)	√	√	√
ASAS	Electronic Air Cleaners (* = -10, -11, -12 or -18)	√	√	√
AMU	Media Air Cleaners (* = 1620, 2020, 1625 or 2025)	√	√	√

[1] White-Rodgers valve only

[2] White-Rodgers and Honeywell valves

Specifications

	GMVC8 0704BX*	GMVC8 0905CX*	GMVC8 1155CX*
Heating Capacity			
High Fire Input (BTU/h)[1]	70,000	90,000	115,000
High Fire Output (BTU/h)[1] (below)			
Natuarl Gas	57,000	74,000	93,000
LP Gas	50,400	64,000	82,000
Low Fire Input (BTU/h)[1]	49,000	63,000	80,000
Low Fire Output (BTU/h)[1] (below)			
Natuarl Gas	39,200	50,400	64,000
LP Gas	39,200	50,400	64,000
AFUE[2]	80	80	80
Available AC @ 0.5" ESP	1.5 - 3.0	2.0 - 5.0	2.0 - 5.0
Temperature Rise Range (° F)	20 - 50	20 - 50	25 - 55
Circulator Blower			
Size (D x W)	10" x 8"	10" x 10"	10" x 10"
Horsepower - RPM	¾	¾	¾
Speed	Variable	Variable	Variable
Vent Diameter[1]	4"	4"	4"
No. of Burners	3	4	5
Disposable Filter Size (in²)	711	960	960
Electrical Data			
Min. Circuit Ampacity[3]	12.1	12.1	12.1
Max. Overcurrent Device (amps)[4]	15	15	15
Ship Weight (lbs)	138	156	156

1 Natural Gas BTU/h. For altitudes above 2,000', reduce input rating 4% for each 1,000' above sea level.

2 DOE AFUE based upon Isolated Combustion System (ICS)

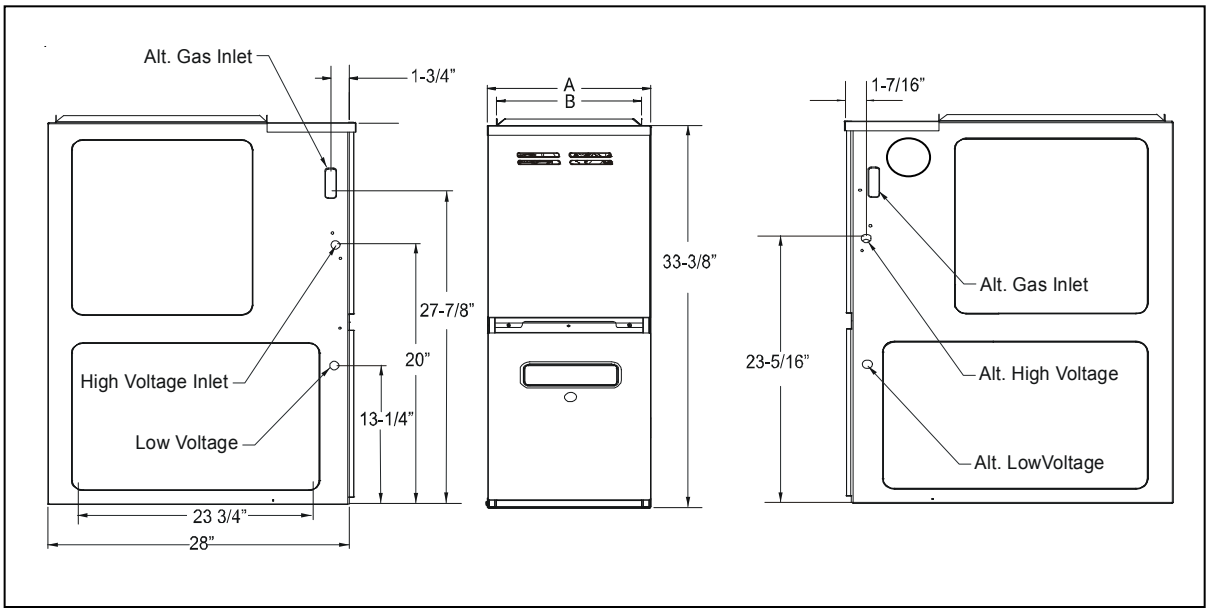
3 Minimum Circuit Ampacity = (1.25 x Circulator Blower Amps) + ID Blower amps. Wire size should be determined in accordance with National Electrical Codes. Extensive wire runs will require larger wire sizes.

4 Maximum Overcurrent Protection Device refers to maximum recommended fuse or circuit breaker size. May use fuses or HACR-type circuit breakers of the same size as noted.

Notes

- All furnaces are manufactured for use on 115 VAC, 60 Hz, single-phase electrical supply.
- Gas Service Connection ½" FPT
- Important: Size fuses and wires properly and make electrical connections in accordance with the National Electrical Code and/or all existing local codes.

Dimensions



Model	A	B
GMVC80704BX*	17½"	16"
GMVC80905CX*	21"	19½"
GMVC81155CX*	21"	19½"

Minimum Clearances to Combustible Materials

Sides	Rear	Front[1]	Vent[2]		Top
			SW	B	
1	0	3	6	1	1

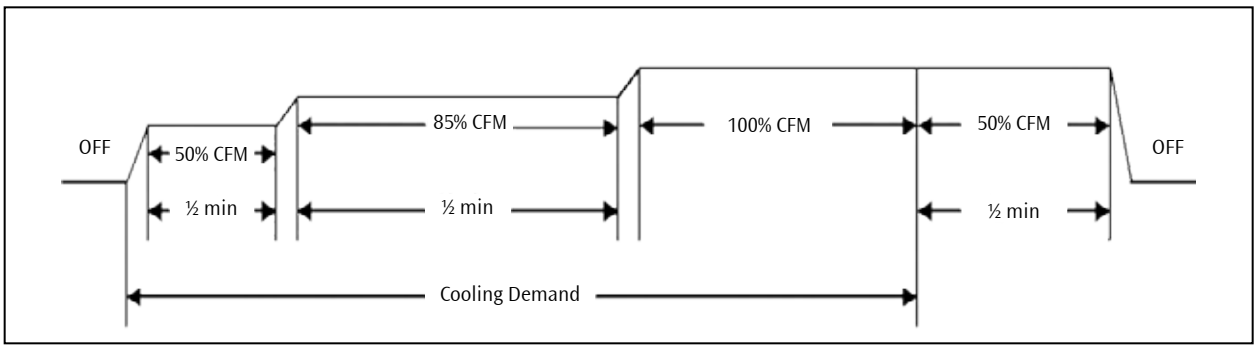
Approved for line contact in the horizontal position.

[1] 24" clearance for serviceability recommended.

[2] Single Wall Vent (SW) to be used only as a connector. Refer to the venting tables outlined in the Installation Manual for additional venting requirements.

Auto-Comfort Mode

During Auto-Comfort mode, the furnace ramps up to 50% of the demand for half a minute. It then ramps to 85% of the full cooling demand airflow and operates there for approximately 7½ minutes. The motor then steps up to the full demand airflow. This mode spends a half minute at 50% airflow OFF delay.



Airflow Data

High- or Single-Stage Cooling Speeds

GMVC80704BX*		
Cooling Speed Tap	Adjust Tap	CFM[1]
A	Minus (-)	540
	Normal	600
	Plus (+)	660
B	Minus (-)	720
	Normal	800
	Plus (+)	880
C	Minus (-)	990
	Normal	1,100
	Plus (+)	1,210
D	Minus (-)	1,260
	Normal	1,400
	Plus (+)	1,540

GMVC80905CX*		
Cooling Speed Tap	Adjust Tap	CFM[1]
A	Minus (-)	720
	Normal	800
	Plus (+)	880
B	Minus (-)	990
	Normal	1,100
	Plus (+)	1,210
C	Minus (-)	1,260
	Normal	1,400
	Plus (+)	1,540
D	Minus (-)	1,620
	Normal	1,800
	Plus (+)	1,980

GMVC81155CX*		
Cooling Speed Tap	Adjust Tap	CFM[1]
A	Minus (-)	720
	Normal	800
	Plus (+)	880
B	Minus (-)	990
	Normal	1,100
	Plus (+)	1,210
C	Minus (-)	1,260
	Normal	1,400
	Plus (+)	1,540
D	Minus (-)	1,620
	Normal	1,800
	Plus (+)	1,980

Low-Stage Cooling Speeds

GMVC80704BX*		
Cooling Speed Tap	Adjust Tap	CFM[1]
A	Minus (-)	351
	Normal	390
	Plus (+)	429
B	Minus (-)	468
	Normal	520
	Plus (+)	572
C	Minus (-)	644
	Normal	715
	Plus (+)	787
D	Minus (-)	819
	Normal	910
	Plus (+)	1,001

GMVC80905CX*		
Cooling Speed Tap	Adjust Tap	CFM[1]
A	Minus (-)	468
	Normal	520
	Plus (+)	572
B	Minus (-)	644
	Normal	715
	Plus (+)	787
C	Minus (-)	819
	Normal	910
	Plus (+)	1,001
D	Minus (-)	1,053
	Normal	1,170
	Plus (+)	1,287

GMVC81155CX*		
Cooling Speed Tap	Adjust Tap	CFM[1]
A	Minus (-)	468
	Normal	520
	Plus (+)	572
B	Minus (-)	644
	Normal	715
	Plus (+)	787
C	Minus (-)	819
	Normal	910
	Plus (+)	1,001
D	Minus (-)	1,053
	Normal	1,170
	Plus (+)	1,287

[1] @ .1" to .8" W.C. ESP

Notes

- These charts are for furnaces installed at 0' - 2,000'. At higher altitudes, a properly de-rated unit will have the same temperature rise at a particular CFM, while the ESP at that CFM will be lower.
- THE INSTALLATION IS TO BE ADJUSTED TO OBTAIN A TEMPERATURE RISE WITHIN THE RANGE LISTED ON THE FURNACE NAMEPLATE.
- Propane gas installations will have a high-stage rise approximately 4° lower than shown in the tables.

Airflow Data (cont.)

Heating Speeds

GMVC80704BX* (Rise Range: 20° - 50°F)				
Cooling Speed Tap	Adjust Tap	Low-Stage CFM[1]	High-Stage CFM[1]	Rise (°F)
A	Minus (-)	790	1125	46
	Normal	875	1250	41
	Plus (+)	960	1375	38
B	Minus (-)	850	1215	43
	Normal	945	1350	38
	Plus (+)	1040	1485	35
C	Minus (-)	915	1305	40
	Normal	1015	1450	36
	Plus (+)	1115	1595	33
D	Minus (-)	975	1395	37
	Normal	1085	1550	33
	Plus (+)	1195	1705	30

GMVC80905CX* (Rise Range: 20° - 50°F)				
Cooling Speed Tap	Adjust Tap	Low-Stage CFM[1]	High-Stage CFM[1]	Rise (°F)
A	Minus (-)	945	1350	49
	Normal	1050	1500	44
	Plus (+)	1155	1650	40
B	Minus (-)	1010	1440	46
	Normal	1120	1600	42
	Plus (+)	1230	1760	38
C	Minus (-)	1070	1530	44
	Normal	1190	1700	39
	Plus (+)	1310	1870	36
D	Minus (-)	1135	1620	41
	Normal	1260	1800	37
	Plus (+)	1385	1980	34

[1] @ .1" to .8" W.C. ESP

GMVC81155CX* (Rise Range: 25° - 55°F)				
Cooling Speed Tap	Adjust Tap	Low-Stage CFM[1]	High-Stage CFM[1]	Rise (°F)
A	Minus (-)	1090	1555	55
	Normal	1210	1725	49
	Plus (+)	1330	1900	45
B	Minus (-)	1105	1575	54
	Normal	1225	1750	49
	Plus (+)	1350	1925	44
C	Minus (-)	1120	1600	53
	Normal	1245	1775	48
	Plus (+)	1370	1955	44
D	Minus (-)	1135	1620	53
	Normal	1260	1800	47
	Plus (+)	1385	1980	43

Notes

- These charts are for furnaces installed at 0' - 4,500'. At higher altitudes, a properly de-rated unit will have the same temperature rise at a particular CFM, while the ESP at that CFM will be lower.
- The installation must be adjusted to obtain a temperature rise within the range listed on the furnace nameplate.
- Do not operate above .5" w.c. ESP in heating mode.
- Propane gas installations will have a high-stage rise approximately 4° lower than shown in the tables.

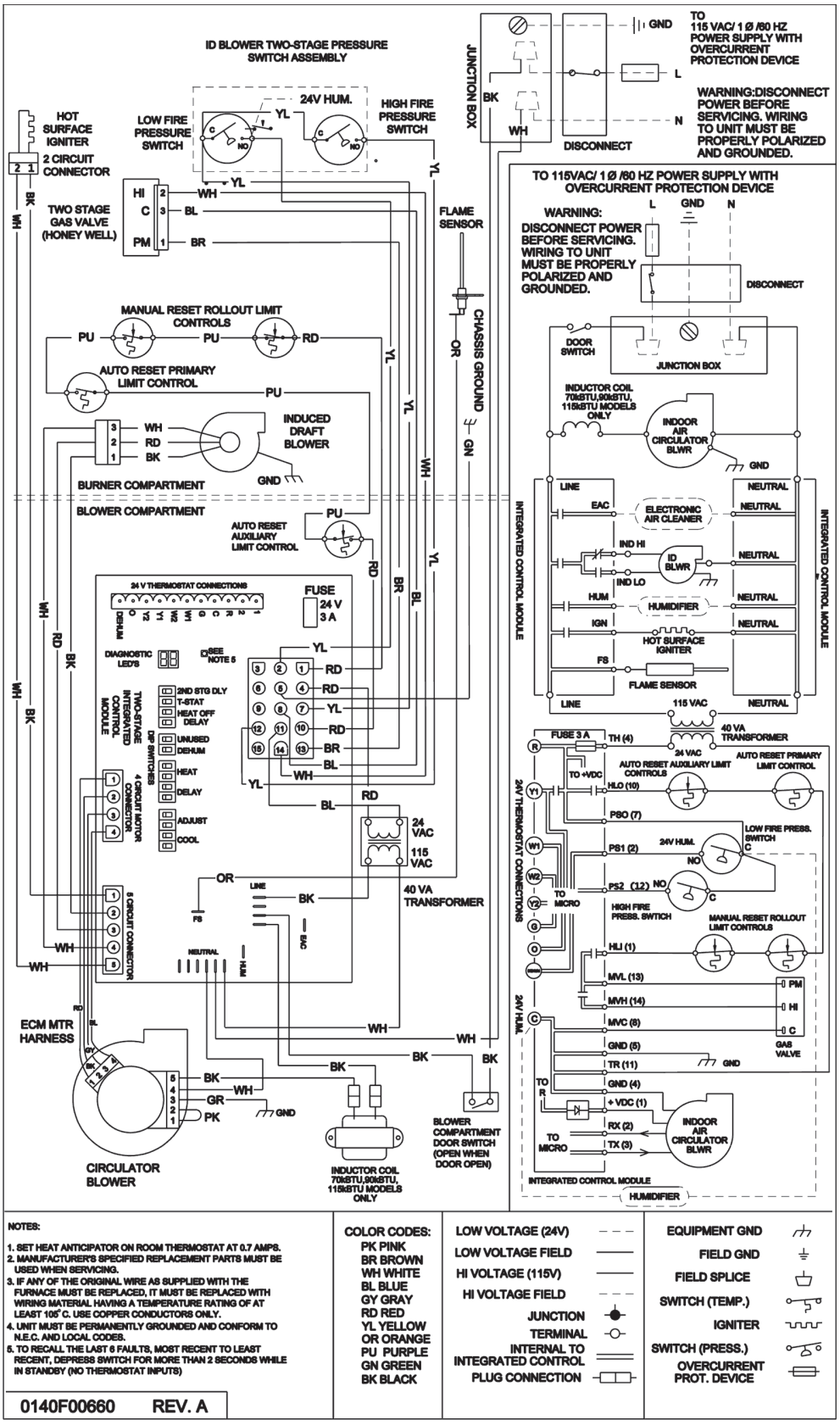
Continous Fan Speeds

Model	Furnace Maximum CFM	Continuous Fan Speed[1,2]
GMVC80704BX*	1760	530
GMVC80905CX*	2000	600
GMVC81155CX*	2000	600

[1] Continuous fan speed is 30% of furnace maximum CFM

[2] Three continuous fan speeds are possible with the CTK01AA thermostat: 30%, 50%, and 70% of furnace maximum CFM

WIRING DIAGRAM WITH HONEYWELL VALVE

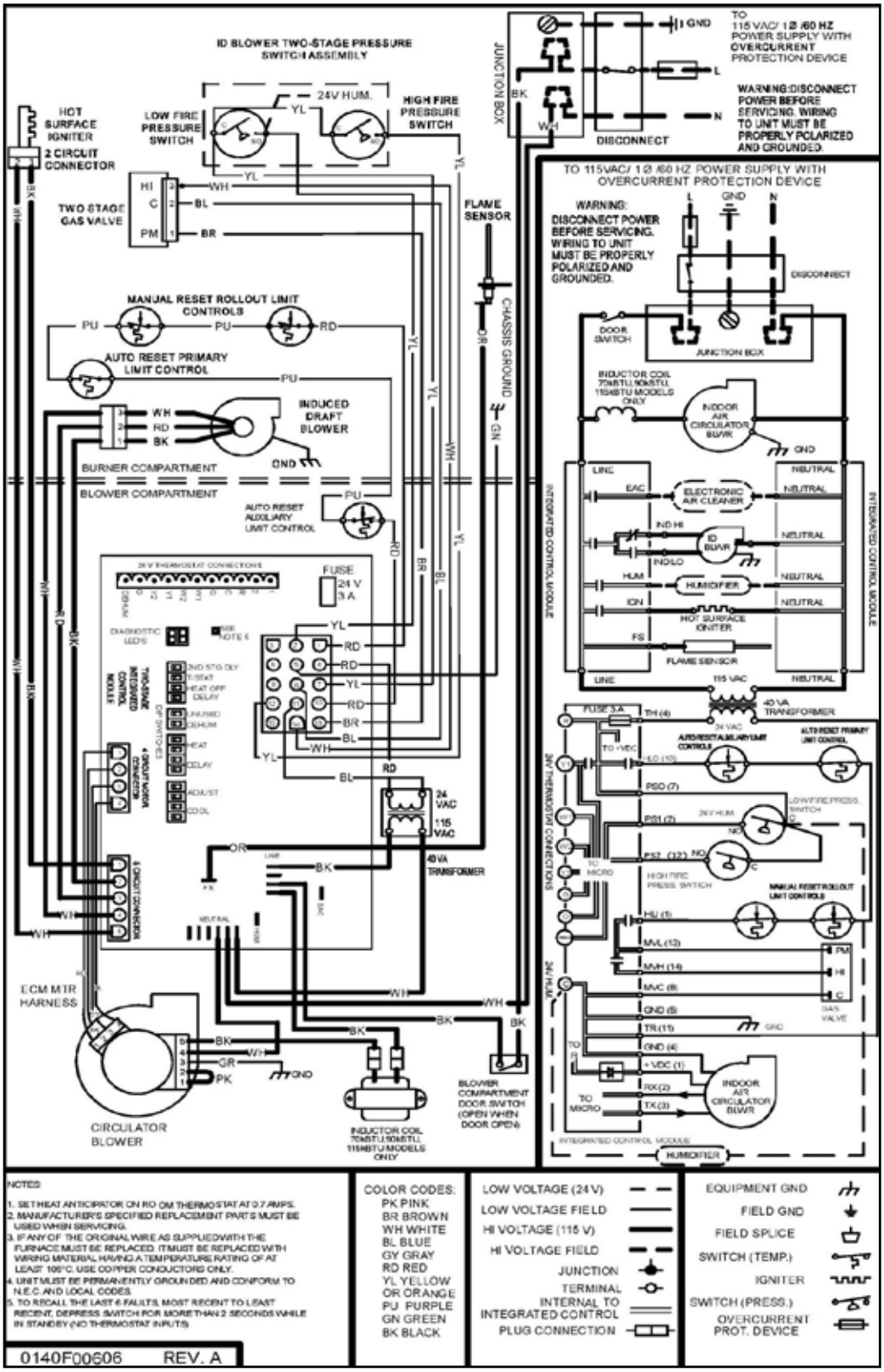

ID BLOWER TWO-STAGE PRESSURE SWITCH ASSEMBLY
HOT SURFACE IGNITER
2 CIRCUIT CONNECTOR
LOW FIRE PRESSURE SWITCH
24V HUM.
HIGH FIRE PRESSURE SWITCH
TWO STAGE GAS VALVE (HONEY WELL)
MANUAL RESET ROLLOUT LIMIT CONTROLS
AUTO RESET PRIMARY LIMIT CONTROL
INDUCED DRAFT BLOWER
BURNER COMPARTMENT
BLOWER COMPARTMENT
AUTO RESET AUXILIARY LIMIT CONTROL
FLAME SENSOR
CHASSIS GROUND
JUNCTION BOX
DISCONNECT
TO 115 VAC/ 1 Ø /60 HZ POWER SUPPLY WITH OVERCURRENT PROTECTION DEVICE
WARNING:DISCONNECT POWER BEFORE SERVICING. WIRING TO UNIT MUST BE PROPERLY POLARIZED AND GROUNDED.
TO 115VAC/ 1 Ø /60 HZ POWER SUPPLY WITH OVERCURRENT PROTECTION DEVICE
WARNING: DISCONNECT POWER BEFORE SERVICING. WIRING TO UNIT MUST BE PROPERLY POLARIZED AND GROUNDED.
DOOR SWITCH
INDUCTOR COIL 70kBTU,90kBTU, 115kBTU MODELS ONLY
INDOOR AIR CIRCULATOR BLWR
INTEGRATED CONTROL MODULE
ELECTRONIC AIR CLEANER
ID BLWR
HUMIDIFIER
HOT SURFACE IGNITER
FLAME SENSOR
40 VA TRANSFORMER
24 V THERMOSTAT CONNECTIONS
FUSE 24 V 3 A
DIAGNOSTIC LED'S
SEE NOTE 5
TWO-STAGE INTEGRATED CONTROL MODULE
DIP SWITCHES
4 CIRCUIT MOTOR CONNECTOR
5 CIRCUIT CONNECTOR
ECM MTR HARNESS
CIRCULATOR BLOWER
INDUCTOR COIL 70kBTU,90kBTU, 115kBTU MODELS ONLY
BLOWER COMPARTMENT DOOR SWITCH (OPEN WHEN DOOR OPEN)
GAS VALVE
HIGH FIRE PRESS. SWITCH
LOW FIRE PRESS. SWITCH
MANUAL RESET ROLLOUT LIMIT CONTROLS
24V THERMOSTAT CONNECTIONS
TO MICRO
NOTES:
1. SET HEAT ANTICIPATOR ON ROOM THERMOSTAT AT 0.7 AMPS.
2. MANUFACTURER'S SPECIFIED REPLACEMENT PARTS MUST BE USED WHEN SERVICING.
3. IF ANY OF THE ORIGINAL WIRE AS SUPPLIED WITH THE FURNACE MUST BE REPLACED, IT MUST BE REPLACED WITH WIRING MATERIAL HAVING A TEMPERATURE RATING OF AT LEAST 105°C. USE COPPER CONDUCTORS ONLY.
4. UNIT MUST BE PERMANENTLY GROUNDED AND CONFORM TO N.E.C. AND LOCAL CODES.
5. TO RECALL THE LAST 6 FAULTS, MOST RECENT TO LEAST RECENT, DEPRESS SWITCH FOR MORE THAN 2 SECONDS WHILE IN STANDBY (NO THERMOSTAT INPUTS)
COLOR CODES:
PK PINK
BR BROWN
WH WHITE
BL BLUE
GY GRAY
RD RED
YL YELLOW
OR ORANGE
PU PURPLE
GN GREEN
BK BLACK
LOW VOLTAGE (24V)
LOW VOLTAGE FIELD
HI VOLTAGE (115V)
HI VOLTAGE FIELD
JUNCTION
TERMINAL
INTERNAL TO INTEGRATED CONTROL
PLUG CONNECTION
EQUIPMENT GND
FIELD GND
FIELD SPLICE
SWITCH (TEMP.)
IGNITER
SWITCH (PRESS.)
OVERCURRENT PROT. DEVICE
0140F00660 REV. A

WARNING

High Voltage: Disconnect all power before servicing or installing this unit. Multiple power sources may be present. Failure to do so may cause property damage, personal injury, or death.

Wiring is subject to change. Always refer to the wiring diagram or the unit for the most up-to-date wiring.

WIRING DIAGRAM WITH WHITE-RODGERS VALVE


ID BLOWER TWO-STAGE PRESSURE SWITCH ASSEMBLY
HOT SURFACE IGNITER
2 CIRCUIT CONNECTOR
LOW FIRE PRESSURE SWITCH
24V HUM.
HIGH FIRE PRESSURE SWITCH
TWO STAGE GAS VALVE
HI
C
PM
FLAME SENSOR
CHASSIS GROUND
MANUAL RESET ROLLOUT LIMIT CONTROLS
AUTO RESET PRIMARY LIMIT CONTROL
INDUCED DRAFT BLOWER
BURNER COMPARTMENT
BLOWER COMPARTMENT
AUTO RESET AUXILIARY LIMIT CONTROL
FUSE 24 V 3 A
24 VAC
115 VAC
40 VA TRANSFORMER
ECM MTR HARNESS
CIRCULATOR BLOWER
INDUCTOR COIL 70kBTU,90kBTU, 110kBTU MODELS ONLY
BLOWER COMPARTMENT DOOR SWITCH (OPEN WHEN DOOR OPEN)
JUNCTION BOX
DISCONNECT
TO 115 VAC/ 1 Ø /60 HZ POWER SUPPLY WITH OVERCURRENT PROTECTION DEVICE
WARNING:DISCONNECT POWER BEFORE SERVICING. WIRING TO UNIT MUST BE PROPERLY POLARIZED AND GROUNDED.
DOOR SWITCH
INDOOR AIR CIRCULATOR BLWR
ELECTRONIC AIR CLEANER
ID BLWR
HUMIDIFIER
HOT SURFACE IGNITER
FLAME SENSOR
INTEGRATED CONTROL MODULE
HUMIDIFIER
NOTES:
1. SET HEAT ANTICIPATOR ON RO OM THERMOSTAT AT 0.7 AMPS.
2. MANUFACTURER'S SPECIFIED REPLACEMENT PARTS MUST BE USED WHEN SERVICING.
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4. UNIT MUST BE PERMANENTLY GROUNDED AND CONFORM TO N.E.C. AND LOCAL CODES.
5. TO RECALL THE LAST 6 FAULTS, MOST RECENT TO LEAST RECENT, DEPRESS SWITCH FOR MORE THAN 2 SECONDS WHILE IN STANDBY (NO THERMOSTAT INPUTS).
0140F00606 REV. A
COLOR CODES:
PK PINK
BR BROWN
WH WHITE
BL BLUE
GY GRAY
RD RED
YL YELLOW
OR ORANGE
PU PURPLE
GN GREEN
BK BLACK
LOW VOLTAGE (24 V)
LOW VOLTAGE FIELD
HI VOLTAGE (115 V)
HI VOLTAGE FIELD
JUNCTION
TERMINAL
INTERNAL TO INTEGRATED CONTROL
PLUG CONNECTION
EQUIPMENT GND
FIELD GND
FIELD SPLICE
SWITCH (TEMP.)
IGNITER
SWITCH (PRESS.)
OVERCURRENT PROT. DEVICE

WARNING

High Voltage: Disconnect all power before servicing or installing this unit. Multiple power sources may be present. Failure to do so may cause property damage, personal injury, or death.

Wiring is subject to change. Always refer to the wiring diagram or the unit for the most up-to-date wiring.

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